

What is claimed is:

1. A catalytic combustor comprising a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B, the strips being arranged to form a stack, wherein Side A of each strip inside the stack faces Side A of an adjacent strip, and wherein Side B of each strip inside the stack faces Side B of an adjacent strip,

wherein at least one of Side A and Side B of each strip is selectively coated with catalyst.

2. The catalytic combustor of Claim 1, wherein Side A defines a pattern of catalyst coating, and wherein Side B defines a pattern of catalyst coating, and wherein the pattern of catalyst coating of Side A is different from the pattern of catalyst coating of Side B.

3. A catalytic combustor comprising a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B, each strip having an inlet end and an outlet end, the strips being arranged to form a stack, wherein Side A of each strip inside the stack faces Side A of an adjacent strip, and wherein Side B of each strip inside the stack faces Side B of an adjacent strip,

wherein Side A of each strip is selectively coated with catalyst, and wherein Side B of each strip is uncoated.

4. A catalytic combustor comprising a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B, each strip having an inlet end and an outlet end, the strips being arranged to form a stack, wherein Side A of each strip inside the stack faces Side A of an adjacent strip, and wherein Side B of each strip inside the stack faces Side B of an adjacent strip,

wherein Side A of each strip has an uncoated inlet band located at the

inlet end, Side A being coated with catalyst elsewhere, and wherein Side B is uncoated.

5. The combustor of Claim 4, wherein each strip has a shoulder located at the inlet end.

6. A catalytic combustor comprising a plurality of similar strips of metal, each strip having two sides designated as Side A and Side B, each strip having an inlet end and an outlet end, the strips being arranged to form a stack, wherein Side A of each strip inside the stack faces Side A of an adjacent strip, and wherein Side B of each strip inside the stack faces Side B of an adjacent strip,

wherein Side A of each strip has an uncoated inlet band located at the inlet end, Side A being coated with catalyst elsewhere, wherein Side B has an uncoated inlet band located at the inlet end, wherein Side B also has a light-off band which is coated with catalyst, the light-off band being adjacent to the inlet band, and wherein Side B is uncoated elsewhere.

7. The combustor of Claim 6, wherein the inlet band of Side A is opposite to, and has a same size as, the inlet band of Side B.

8. The combustor of Claim 6, wherein the strip has a shoulder located at the inlet end.

9. A catalytic combustor comprising a plurality of similar strips of metal, each strip having two sides designated as Side A and Side B, each strip having an inlet end and an outlet end, the strips being arranged to form a stack, wherein Side A of each strip inside the stack faces Side A of an adjacent strip, and wherein Side B of each strip inside the stack faces Side B of an adjacent strip,

wherein Side A of each strip has an uncoated inlet band located at the inlet end, wherein Side B of each strip has an uncoated inlet band located at the inlet end,

wherein Side A has a light-off band which is coated with catalyst, adjacent to the inlet band,

wherein Side A has at least one combustion band, downstream of the light-off band, the combustion band being coated with catalyst,

wherein Side B has a light-off band which is coated with catalyst, adjacent to the inlet band, and wherein Side B is uncoated elsewhere.

10. The combustor of Claim 9, wherein the inlet band of Side A is opposite to, and has a same size as, the inlet band of Side B.

11. The combustor of Claim 10, wherein the light-off band of Side A is opposite to, and has a same size as, the light-off band of Side B.

12. The combustor of Claim 9, wherein an uncoated band separates the light-off band of Side A from said combustion band.

13. The combustor of Claim 9, wherein Side A has a plurality of combustion bands, the combustion bands being separated by uncoated bands.

14. The combustor of Claim 13, wherein Side A has a final band, located at the outlet end, the final band being uncoated.

15. The combustor of Claim 9, wherein the strip has a shoulder located at the inlet end.

16. The combustor of Claim 9, wherein the inlet band is wider than the light-off band.

17. The combustor of Claim 16, wherein at least one combustion band is wider than the light-off band.

18. The combustor of Claim 9, wherein at least one combustion band is wider than the inlet band.

19. A catalytic combustor comprising a strip of metal folded back and forth upon itself, the strip having two sides, designated as Side A and Side B, wherein Side A includes a plurality of regions which are

selectively coated with catalyst according to a pattern designated as pattern "A", and wherein Side B includes a plurality of regions which are selectively coated with catalyst according to a pattern designated as pattern "B", and wherein, when the strip is folded back and forth upon itself, each pattern "A" faces another pattern "A", and each pattern "B" faces another pattern "B".

20. The catalytic combustor of Claim 19, wherein pattern "A" is different from pattern "B".

21. A catalytic combustor comprising a strip of metal folded back and forth upon itself, the strip having two sides, designated as Side A and Side B, wherein Side A includes a plurality of regions which are selectively coated with catalyst according to a pattern designated as pattern "A", and wherein Side B is uncoated, and wherein, when the strip is folded back and forth upon itself, each pattern "A" faces another pattern "A".

22. A catalytic combustor comprising a strip of metal folded back and forth upon itself, the strip having two sides, designated as Side A and Side B, wherein Side A includes a plurality of regions which are selectively coated with catalyst according to a pattern designated as pattern "A", and wherein Side B is uncoated, wherein, when the strip is folded back and forth upon itself, each pattern "A" faces another pattern "A", wherein the strip has an inlet end,

wherein pattern "A" defines an uncoated inlet band located at the inlet end of the strip, and a coated region outside said uncoated inlet band.

23. A method of making a catalytic combustor, comprising:

a) providing a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B,

b) selectively coating Side A and Side B of each strip with catalyst, wherein Side A of each strip has a substantially identical pattern of catalyst coating, and wherein Side B of each strip has a substantially identical pattern of catalyst coating, and

c) arranging the strips to form a stack, such that Side A of each strip inside the stack faces Side A of an adjacent strip, and such that Side B of each strip inside the stack faces Side B of an adjacent strip.

24. The method of Claim 23, further comprising selecting the pattern of Side A to be different from the pattern of Side B.

25. A method of making a catalytic combustor, comprising:

a) providing a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B,

b) selectively coating Side A of each strip with catalyst, such that Side A of each strip has a pattern of catalyst coating, and wherein Side B of each strip is uncoated, and

c) arranging the strips to form a stack, such that Side A of each strip inside the stack faces Side A of an adjacent strip, and such that Side B of each strip inside the stack faces Side B of an adjacent strip.

26. A method of making a catalytic combustor, comprising:

a) providing a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B, each strip defining an inlet end,

b) selectively coating Side A of each strip with catalyst, such that Side A of each strip has an uncoated band located at the inlet end, and a catalyst coating elsewhere, and wherein Side B of each strip is uncoated, and

c) arranging the strips to form a stack, such that Side A of each

strip inside the stack faces Side A of an adjacent strip, and such that Side B of each strip inside the stack faces Side B of an adjacent strip.

27. A method of making a catalytic combustor, comprising:

a) providing a plurality of similar strips of metal, each strip having two sides, designated as Side A and Side B, each strip defining an inlet end,

b) selectively coating Side A of each strip with catalyst, such that Side A of each strip has an uncoated band located at the inlet end, and a catalyst coating elsewhere, and coating Side B of each strip such that Side B has an uncoated band located at the inlet end and a light-off band adjacent to said uncoated band, and

c) arranging the strips to form a stack, such that Side A of each strip inside the stack faces Side A of an adjacent strip, and such that Side B of each strip inside the stack faces Side B of an adjacent strip.

28. A method of making a catalytic combustor, comprising:

a) providing a strip of metal, the strip having two sides, designated as Side A and Side B,

b) selectively coating a plurality of regions of Side A with a catalyst according to a pattern designated as pattern "A", and

c) folding the strip back and forth upon itself such that a region having pattern "A" faces another region having pattern "A".

29. The method of Claim 28, wherein step (c) is preceded by selectively coating a plurality of regions of Side B with a catalyst according to a pattern designated as pattern "A", and wherein, when step (c) is completed, a region having pattern "B" faces another region having pattern "B".

30. The method of Claim 29, further comprising selecting pattern "A" to be different from pattern "B".